

The Rattlesnake Hills Elk Herd

Background and Management Challenges







Washington Department of
Fish & Wildlife


Origins and Early History




- Herd established by natural colonization, winter 1972-73
- Original immigrants less than 10 elk
- Colonizers took advantage of security afforded by Hanford Site and abundant forage
- Elk regularly recorded in aerial security logs by mid-1970s
- Population grew slowly at first, then rapidly by mid-1980s
- Initially, elk use of non-Hanford lands minimal, but exploratory movements increased use of adjacent lands by late 1980s

Documentation and Scientific Investigation

- Most Studied Elk Herd in WA (2 Theses; 12 journal and 5 magazine articles)
- Radiocollared elk maintained in herd since 1983 (20+ yrs)
- Formal studies of movements, ecology, environmental physiology, demography
- Extensive documentation of population growth and expansion of elk use area
- Data collection by USDOE, USFWS, WDFW, 4 universities, and 1 Native American Tribe



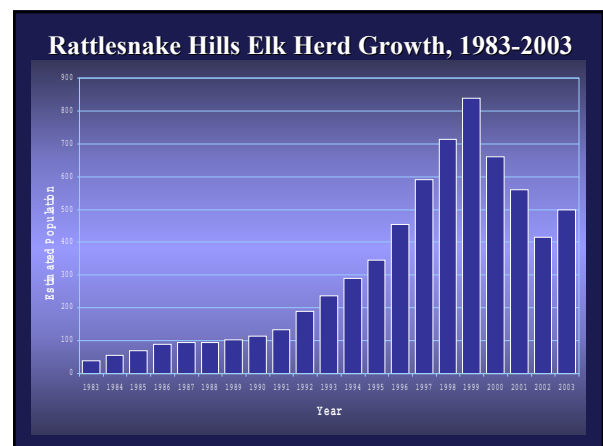
The Biology

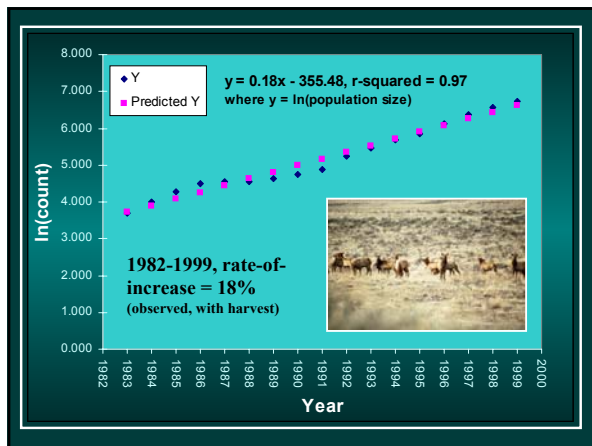


- These elk well-adapted to desert living
- Very large home ranges
- High apparent fitness
- High fecundity in females / exceptional antler growth in males
- Demographics support a long-term rate-of-increase of 20%
- During a period in the 1980s, short term rate-of-increase was 31%, nearly a maximum ever recorded for an elk population w/o immigration
- Population recruited up to 0.72 calves per cow (0.91 per adult cow) during 1980s / approx. 0.58 per adult cow during 1993-2000

Reasons for Success...

- Area colonized has been protected from livestock grazing since 1968, with a low density mule deer pop'n the only other large herbivore
- Few if any effective non-human elk predators (no bears, cougars rare)
- Mild winters in shrub-steppe minimizes winter energy deficits (some evidence these elk actually gain fat over the winter)
- Hanford Site security limits human disturbance and historically provided a no-hunting refugium



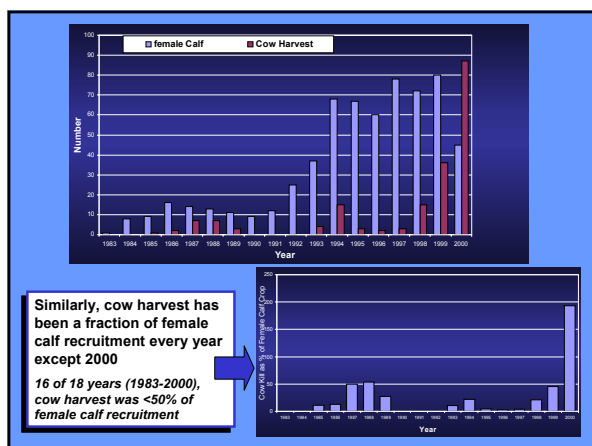
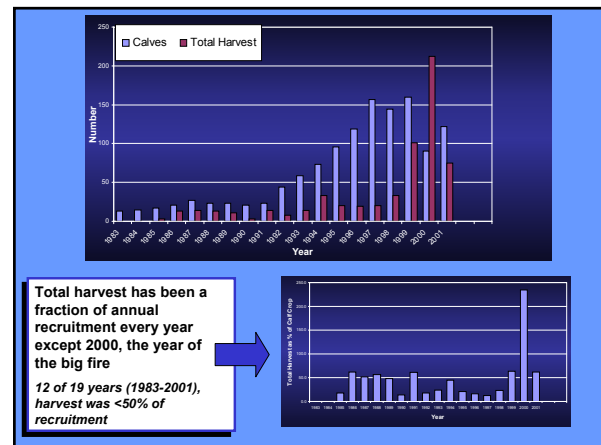
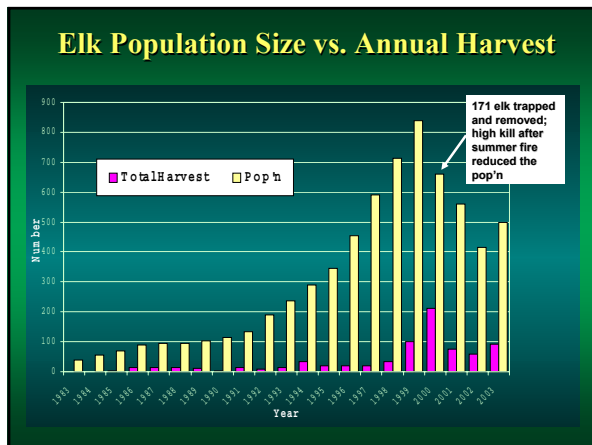
People Effects on Elk...

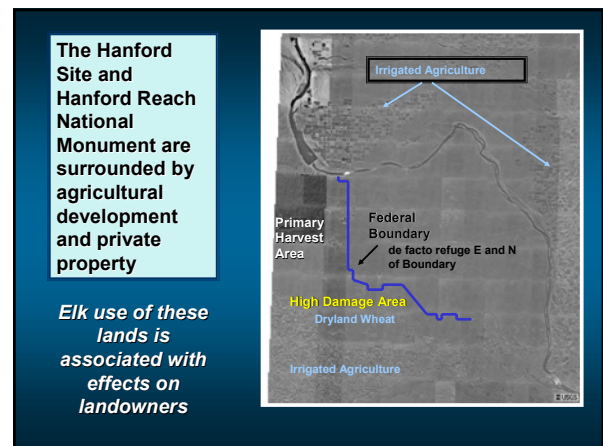
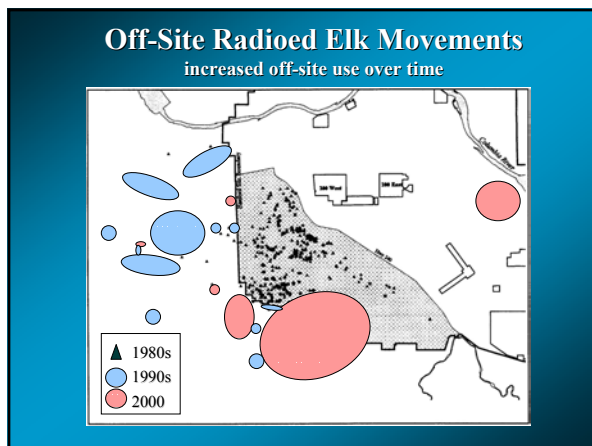
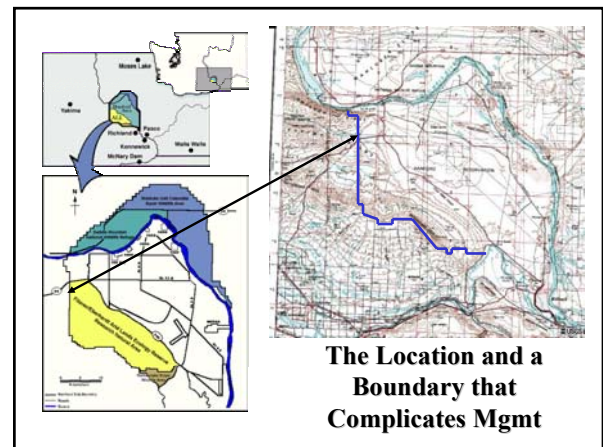
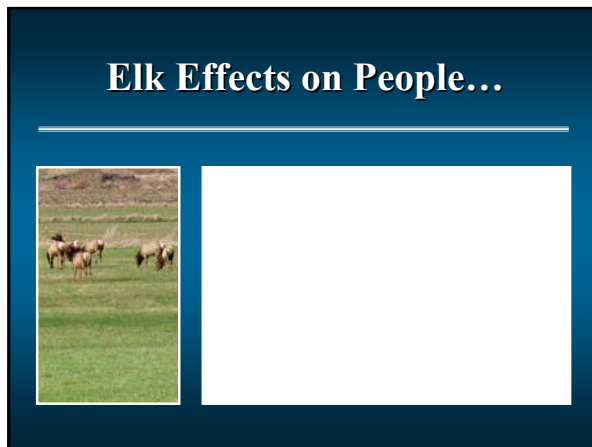
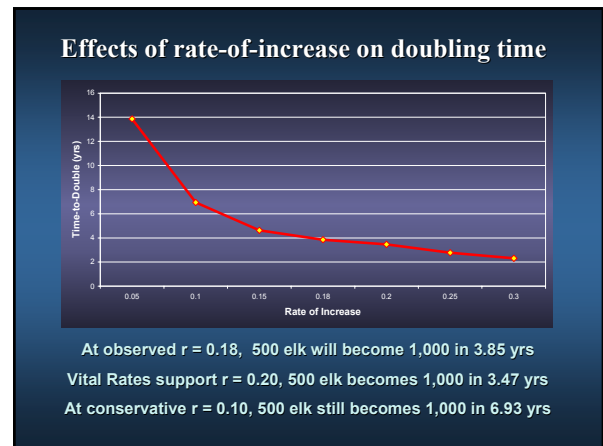
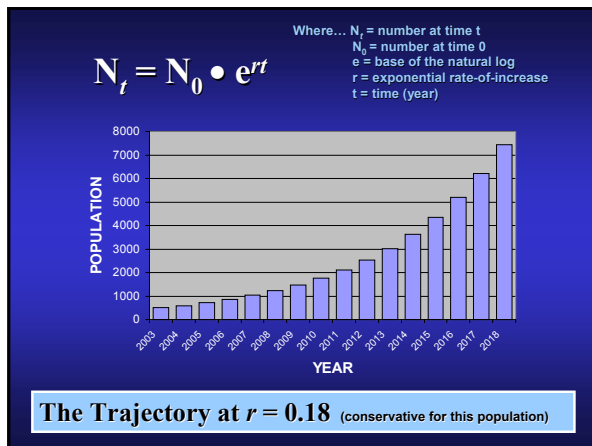
- Occasional elk harvest assumed before 1986, but trivial

- Increased harvest in 1986, but still <20 elk through 1993

- Erratic harvest since 1993, but only 4 yrs since colonization where >20 cows were killed

- High harvest in 2000, when elk were displaced from federal lands following wildfire, but only 10 and 27 cows harvested in 2002 and 2003

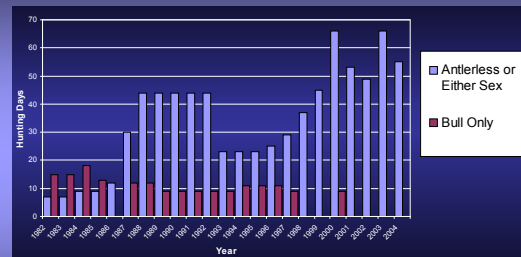




Damage and Associated Mgmt Costs

Year	Complaints & Filed Claims	Hours (Hazing/Damage Investigation)	Damage Payment	Hazing Costs
1996	1, 0	2	--	
1997	1, 0	4	--	
1998	5, 0	59	--	
1999	6, 1	63	\$6,000	
2000	23, 5	371	\$213,000	
2001	16, 0	193 (ground hazing)	\$0.00	
2002	18, 7	130 (no hazing)	\$287,000	
2003	11, 2	225 (hazing & damage investigations)	\$40,000	\$8,800 (ground) \$7,000 (aerial)
Total	81, 15	1,047	\$546,000	

General Elk Hunting Seasons



Seasons were liberalized over time, but only modestly increased harvest (excepting immediately following the big 2000 fire).

During 6 of the last 7 years, general season antlerless or either sex elk hunting exceeded 40 days

Liberalized hunting, if confined to currently open areas cannot yield enough harvest to control this elk population



The Hanford Reach National Monument is a *de facto* refuge that hinders WDFW elk management and creates ill-will with other landowners

Alternatives...

Option	Advantages	Disadvantages
Status Quo	Easy	Ineffective, continues impacts to other landowners
Trap/Relocate	Will reduce population	Costs, perpetual need, risk to elk and people, few places to take the elk
Fence	Can manage distribution	Costly to build and maintain, only delays problem of elk population growth
Open portion of HRNP to hunting	Could be effective, consistent with agency mandates	Some opposition, will require planning and has some costs to implementing

Public hunting on the HRNM is a viable alternative the USFWS could consider in concert with the WDFW

Both agencies recognize the importance of other HRNM resources...which suggests the need for a creative limited-entry design to minimize negative effects on the HRNM...

What that design would look like, no one knows, because federal reluctance to seriously consider this alternative has precluded the necessary discussion

Public Resources...Public Trust

The management of the Rattlesnake Hills elk population is of considerable interest and consequence to the public...

Status quo is not working and new approaches are needed. Among the most logical would be reducing the "refuge" effect that limits the effectiveness of elk hunting as a management tool by opening the HRNM to limited, objective-driven elk hunting...

WDFW does not want to usurp the USFWS's role in managing HRNM resources. We are certain, however, that managing these resources is the public's business, and they should be allowed to see a variety of options and comment on them...hunting on the HRNM included.